MIN R)/(IR-1)(BASE STATE-MIN R). Step **498** then returns control to the appropriate series state. Figure **6/6** applies to a single range. One of ordinary skill in the art should appreciate that the calculations may be modified to accommodate a number of possible ranges.

035 It should be apparent to any one skilled in the art that the flow charts provide a method and apparatus for a Voltage Dosimeter.

036 Other Voltage Dosimeters use other means to produce voltage. Fission reactors, mechanical/magnetic reactors, fusion reactors, solar cells, steam/turbine reactors, and fossil fuel burning reactors can function as Voltage Dosimeters controlling voltage in corresponding circuits by the same method and with the same apparatus as the fuel cell Voltage Dosimeter. The range used for v2 depends on the application. Switching function between voltage producing devices employs Step **418** of Figure **4/6** – last range available? - If it answers yes, control passes to Step **436,** the base state, where voltage passes from the device. For all other steps, voltage is transferred to the device.

CLAIMS

037 What is claimed is:

1. A method for maintaining a desired negative electrode voltage of a voltage producing source within a first predetermined range of values having an upper limit and a lower limit so as to control the positive electrode

voltage of the voltage producing source and connected circuits to eliminate the necessity for constant maximum voltage production, the method being adapted for use with a Voltage Dosimeter including an electronic control unit (ECU) having memory, two voltometers connected to each electrode for measuring current voltage at each electrode, a voltage producing source controlled by the ECU for delivering selected voltage producing doses and positive electrode voltage doses to the circuit, the voltage producing source having a plurality of voltage producing doses and positive electrode voltage doses ranging from a first dose to a second dose, the method comprising:

delivering the second voltage producing dose and positive electrode voltage dose to the circuit while repeatedly sequencing through the plurality of sequential positive electrode voltage doses beginning with the first dose and proceeding to an adjacent dose in the sequence after a predetermined time interval has elapsed until the current negative electrode voltage level of the voltage producing source attains the desired voltage level at which point a corresponding positive electrode voltage dose and voltage producing dose are selected from the plurality of sequential voltage producing and positive electrode voltage doses;

delivering the selected positive electrode voltage and voltage producing doses so as to maintain the negative electrode voltage level in its desired range.

2. The method of claim 1 wherein the current circulation time is determined by:

means for storing a predetermined number of base state exit voltage values in memory; and

means for determining a predetermined sequence of base state levels.

3. The method of claim 1 wherein the reaction time is determined by logic flow charts.

4. The method of claim 1 in which a plurality of sequential positive electrode voltage doses are generated in fuel cells, steam reactors, fission reactors, fusion reactors, solar cells, mechanical/magnetic voltage generators, and fossil fuel burning reactors.

5. The method of claim 1 wherein a plurality of sequential positive electrode voltage doses are generated by steam.

6. The method of claim 1 wherein the plurality of positive electrode voltage doses are connected by logical switches.

7. The method of claim 1 wherein a predetermined negative electrode voltage level for a predetermined amount of time produces a predetermined voltage producing and positive electrode voltage dose.

8. The method of claim 1 wherein a first closing of an electric switch produces a first battery discharge and a first negative electrode voltage level in a fuel cell.

9. The method of claim 1 wherein the operating negative electrode voltage range varies with application.

10. The method of claim 1 wherein a first closing of an electric switch produces a first battery discharge and negative electrode voltage.

11. A method for maintaining a desired negative electrode voltage of a fuel cell within a first predetermined range of values having an upper limit and a lower limit so as to control the positive electrode voltage of the fuel cell and connected circuits to eliminate the necessity for constant maximal voltage production, the method being adapted for use with a Voltage Dosimeter including an electronic control unit (ECU) having memory, two voltometers connected to each electrode for measuring current voltage at each electrode, a fuel cell controlled by the ECU for delivering selected reactive gas flow rates to the fuel cell and positive electrode voltage doses to the fuel cell and connected circuits, the fuel cell as a voltage producing source having a plurality of reactive gas flow rates and positive electrode voltage doses ranging from a first dose to a second dose, the method comprising:

delivering the second reactive gas flow rate and the positive electrode voltage dose to the fuel cell and connected circuits while repeatedly

sequencing through the plurality of sequential positive electrode voltage doses beginning with the first dose and proceeding to an adjacent dose in the sequence after a predetermined time interval has elapsed until the current negative electrode voltage level of the fuel cell attains the desired voltage level at which point a corresponding positive electrode voltage dose and a reactive gas flow rate are selected from a plurality of positive electrode voltage doses and reactive gas flow rates.

delivering the selected reactive gas flow rate and the positive electrode voltage dose to the fuel cell so as to maintain the negative electrode voltage in the desired range.

12. The method of claim 11 wherein the current circulation time is determined by:

means for storing a predetermined number of base states;

means for storing positive electrode voltage dose values in memory;

means for determining a predetermined sequence of base states;

means for determining a predetermined sequence of positive electrode voltage doses.

13. The method of claim 11 wherein the reaction time is determined by logic flow charts.

14. The method of claim 11 wherein a predetermined negative electrode voltage level for a predetermined amount of time produces a predetermined